

Commercial and Industrial Retrofit Program

PROGRAM INFORMATION

The program is intended to encourage small, medium, and large commercial and industrial customers in Seattle City Light's service territory to undertake energy retrofits of existing buildings and equipment. Eligible projects include high-efficiency HVAC upgrades and LED lighting conversions including new fixtures, retrofit kits, and networked lighting controls. In addition, City Light also incentivizes complex multi-measure building system upgrades, which also follow these Program Requirements.

Eligibility

To be eligible for funding for a commercial or industrial retrofit project, the customer must have a commercial account in City Light's service territory. In order to receive an incentive, <u>equipment installation cannot begin and products/equipment shall not be purchased until the project has been reviewed and approved by City Light and there is a signed Participation Agreement, as detailed below in the Project Timeline and Required Documentation section. For any product to be eligible for an incentive, it must comply with all product specifications, be clearly marked with product information, and meet all applicable federal, state, and local code requirements. Further details on product eligibility are included in the Product Specifications section below.</u>

If you are not upgrading an existing building or piece of equipment, please visit our website to view our new construction program offerings at https://energysolutions.seattle.gov/your-business/new-construction/.

You may also contact an Energy Advisor to see if your project qualifies for an incentive at (206) 684-3800 or SCLEnergyAdvisor@seattle.gov.

Participant Obligations

Once an eligible application form has been received and approved, City Light will send the customer a Participation Agreement outlining the terms and conditions of participation and incentive payment. The customer must sign and return this agreement within 30 days of receiving the incentive offer. All terms and conditions are legally binding and required. The Participation Agreement will be active for a specified contract term from the date the agreement was signed. Project installation, project review and verification, and incentive payment must be completed within the contract term.

Program Incentive Summary & Funding Caps

Seattle City Light's retrofit incentives are paid based on calculated annual energy savings or on a perunit basis, as indicated in the table below.

- For lighting, incentives may not exceed 70% of total eligible project cost (see Eligible Costs, under Post-Installation Documentation).
- For HVAC, incentives may not exceed 70% of the cost of the energy efficiency portion of the project, also called the incremental cost. The incremental cost shall be defined as one of the following: 25% of total eligible project cost; 50% of HVAC equipment cost; or actual incremental cost (the difference between the quoted cost of minimally-code-compliant equipment and

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proposed efficient equipment).

Incentives are capped at a payback period of at least six-months (accounted for in City Light's program workbooks).

Eligible projects will receive the following incentive rates.

ED Intures and retrofit kits	CONSERVATION ACTION	INCENTIVE (\$/kWh)	SMALL COMMERCIAL INCENTIVE (\$/kWh)*	MEASURE NOTES
Standard controls / Non-Qualified Product Listed advanced lighting controls	COMMERCIAL AND MULTIFAMILY RETROFIT LIG	HTING**	(4)	
Solid Commercial Customers retented a 20% 60mus Solid Commercial Customers retented a 20% 60mus Solid Commercial Customers retented a 20% 60mus Solid Commercial Customers are on the Small General Service rate class and have a monthly electrical demand of \$50kW. An Energy Advisor concenting your rate class.** *For multimary projects, only comman areas are eligible for incentives.** **CHIRCHEATING, VENTILATION AND AIR CONDITIONIONIONIONIONIONIONIONIONIONIONIONIONI	LED fixtures and retrofit kits	\$0.15	\$0.18	Small Commercial customers receive a 20% bonus
Qualified Product Listed Networked Lighting Controls *SoD per fixture Lighting Controls *SoD per fixture SoPo per fixture Sop p		\$0.15	\$0.18	Small Commercial customers receive a 20% bonus
Qualified Product Listed Networked Lighting Controls *Sea DesignLight Sonsortium's NLC Qualifed. Product List for details *Small Commercial customers are on the Small General Service rate class and have a monthly electrical demand of \$50kW. An Energy Advisor can continum your rate class.** *For multifamily projects, only common areas are eligible for incentives.** **WAC (HEATING, VENTILATION AND AIR CONDITIONING)** **Chillers—air-cooled \$0.2.7 Chillers—air-cooled \$0.2.7 Hydronic heat pumps \$0.2.2 Hydronic heat pumps \$0.2.3 Hydronic heat pumps \$0.2.3	HID replacement lamp products	\$0.10	\$0.10	
Confirm your rate class. **For multifamily projects, only common areas are eligible for incentives. HYAC (HEATING, VENTILATION AND AIR CONDITIONIS) Chillers—air-cooled \$0.27 Chillers—air-cooled \$0.27 Air-to-air heat pumps \$0.27 Hydronic heat pumps \$0.27 Packaged terminal heat pumps (PTAP) \$0.27 Packaged terminal heat pumps (PTAP) \$0.27 Variable refrigerant flow heat pumps \$0.27 Air conditioners \$0.27 Computer room air conditioners (CRAC) \$0.27 Economizers \$0.23 Cooling towers \$0.23 HYAC controls \$150 per ton Advanced rooftop controls (ARC)—ARC Lite \$150 per ton Advanced rooftop controls (ARC)—ARC Lite \$225 per ton Advanced Treemestat (Commercial HYACunits) \$200 each Each thermostat (Intermedial FUACunits) \$0.02 DATA CENTER AND IT EQUIPMENT \$0.23 Efficient uninterruptible power supply (UPS) systems \$0.23 Efficient uninterruptible power supply (UPS) systems \$0.23 Efficient uninterruptible power supply (UPS) systems		\$50 per fixture	\$50 per fixture	See DesignLights Consortium's NLC Qualifed
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	Variable frequency drives (VFD/VSD)	\$0.27		

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PROJECT TIMELINE & REQUIRED DOCUMENTATION

To receive an incentive, you must provide City Light with documentation demonstrating the proper installation of energy efficient products. If project documentation is incomplete or insufficient, then an incentive payment may be delayed or denied. Further detail on required documents is included in the following table, and summarized below:

- Step 1: Pre-Installation
 - Product specification sheets
 - Signed application form, pre-installation documentation including scope of work and plans, and estimated project cost, OR
 - Completed Seattle City Light <u>Commercial Retrofit Workbook</u> for projects covered by this workbook¹
- Step 2: Signed Participation Agreement
- Step 3: Post-Installation
 - As-built documentation OR as-built spreadsheet contained in the Commercial Retrofit Workbook for projects covered by this workbook¹
 - Invoice(s)

Pre-Installation

Λ	ction	

Contact an Energy Advisor at (206) 684-3800 or SCLEnergyAdvisor@seattle.gov as you are identifying a retrofit project, or even before the project has been clearly defined. To qualify for program funding, the following required documentation must be submitted to City Light for review and approval. Your project will not qualify for incentive funding if equipment has been purchased and/or if installation has begun prior to review and approval from City Light staff and signed Participation Agreement.

The time needed to calculate or validate energy savings can vary for each project and may include on-site pre-installation equipment verification. Please allow time in the project scheduling for this review.

Documentation

- **Product Specification Sheets:** Product Specification Sheets (also referred to as cut sheets or spec sheets) are required for all products and equipment. Note: If an existing product is being replaced by multiple pieces of equipment not covered by a single product specification sheet, (i.e., separate driver, sensor, ballast, etc.), cut sheets must be submitted for each separate component.
- Estimated Project Cost: Proposed project cost shall be submitted in the
 form of a proposal, quote, estimate, bid. Proposed project costs should
 include all costs borne by the customer for the associated scope of work
 including, but not limited to, contracted or in-house labor, equipment and
 materials, rental equipment, applicable permits, and associated disposal
 fees.
- Incentive Workbook: Customers with projects included in the City Light Commercial Retrofit Workbook (i.e., project calculator) must fill out all preinstallation tabs in the workbook.

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Projects included in Commercial Retrofit Workbook: LED fixtures, LED retrofit kits, lighting controls (including networked lighting controls), HID LEDs, chillers, heat pumps, air conditioners, and variable speed drives.

Participation Agreement

Action

Once the required pre-installation documentation has been submitted, City Light will confirm the project's eligibility to receive an incentive based on the program specifications contained herein and any project-specific addenda. All projects are subject to verification of energy savings calculations and/or visual on-site verification. Final incentive funding is solely the discretion of City Light review.

Once the City Light customer has received the signed the Participation Agreement from City Light, the customer can proceed with purchasing and installing (either inhouse or notifying the contractor to start the installation.)

Documentation

- Participation Agreement: The Participation Agreement outlines what will be required for incentive payment (monitoring, verification, invoices, etc.). The customer must sign and return this agreement within 30 days of receiving the incentive offer. All terms and conditions are legally binding and required. The Participation Agreement will be active for a specified term from the date the agreement was signed. Project installation, project review and verification, and incentive payment must be completed within the project contract term.
- Change in Scope from Pre-Installation: If the customer would like to make any changes to the scope of the project after signing the Participation Agreement, contact City Light immediately to make sure the project is still eligible for an incentive. If no changes are made to the project, there is no need to contact City Light until the project is complete.

Post-Installation

Action

Once the project is completed and the equipment is operating according to scope, contact your Energy Management Analyst or an Energy Advisor to notify City Light that the project is complete and initiate an incentive payment. Projects may also require additional verification in the form of a post-installation site verification, trend logs from the Energy Management System, or electrical metering of equipment to verify equipment installation and confirm proper operation. Refer to the product specifications below and any included project-specific specifications for detailed requirements.

During the post-installation verification, equipment must have labeled model information or a visible nameplate that matches the equipment submittals.

Documentation

- As-built documentation must be submitted reflecting the final installation counts and final equipment model numbers. If equipment selection has changed during the project, product specification sheets for the new equipment must be submitted. As noted in the Participation Agreement section above, you must notify City Light immediately of any change in scope to ensure incentive eligibility.
- Invoice(s): All projects are required to submit a customer invoice that reflects the total project cost in the Commercial Retrofit Workbook, itemized with material and labor costs for the energy-related portion of the work. The project invoice shall be the final invoice for the work completed and should reflect the final amount paid by the customer. If the invoice does not come directly from the customer to City Light, then the customer must be copied on all communication by the sender. All project invoices

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must provide the following level of detail:

- Contractor company name and address
- Customer name and site address
- Unique invoice number
- Date
- Quantity of each item by model number (cost-allocation not required)
- Total customer cost (**Eligible Costs**) including the following elements
 - Equipment
 - Labor
 - Permitting
 - Disposal fees
 - Equipment rental specific to completing the project
 - Design or system commissioning
 - Sales tax
- Payment Assignment Form: If the City Light customer would like the
 incentive payment to go directly to a contractor, this form can be completed
 and signed by both parties to assign payment to a third party. This form is
 located within the Commercial Retrofit Workbook.
- **W9 Form:** If assigning payment to a contractor, a W9 form for the contractor will be required if not already on file.
- **Submittals:** Additional submittals may be required depending on the project. Refer to the Participation Agreement specifications for additional technology-specific requirements.

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PRODUCT SPECIFICATIONS

For any product to be eligible for an energy efficiency incentive, it must be clearly marked with product information and meet all applicable federal, state, and local code requirements. All equipment must carry a safety certification by an approved testing laboratory (UL, CE, ETL, etc.). Listed below are specifications on individual products. In addition, products will need to meet the following City Light requirements.

Retrofit Lighting

Measure	Specifications
All Lighting	For any lighting product to receive an incentive it must meet the criteria included in this table. It is the responsibility of the customer to ensure appropriate illumination levels.
	To be eligible for lighting incentives, all LED fixtures, retrofit kits, and High- Intensity Discharge (HID) replacement lamp products must be listed on a City Light-recognized Qualified Product List (QPL) below: ²
	 DesignLights Consortium (DLC) <u>lighting</u> and/or <u>controls</u>
	ENERGY STAR
	DLC Horticultural QPL (see Indoor Horticulture section for additional specifications)
	In the Commercial Retrofit Workbook, fixture wattage must always be entered as the full input wattage—combined wattage of the fixture (i.e., driver, ballast, on-board controls)—and must match the product specification sheet. See exception for task tuning/high end trim for networked lighting controls below.
LED Fixtures and Ret	rofit Kits
LED Fixtures	 New LED fixtures include: new fixture housing, LED chip board, and integral driver (power supply). New LED fixtures may include, but are not limited to, the following types: troffers, panels, wraps, wall packs, low-bay and high-bay style fixtures, ceiling trim fixtures (with no removeable lamp), and exterior fixtures (e.g., light poles).
Fixture Retrofit Kits	 City Light provides incentives for LED fixture solutions, including fixture retrofit kits. Retrofit kits must be new and match the style of the existing luminaire and the rated power supply. A retrofit kit must feature both integrated lenses (over LED chips) and an existing or new diffuser.
	 City Light will not provide incentives for bare LED chips or strips, removeable lamps, or retrofit kit downlights through the Commercial Retrofit program. Qualified removeable lamps and downlights are eligible for instant discount incentives through our <u>Lighting to Go</u> program.
	 Where retrofit kits are installed, existing lamp sockets are to be removed.
Controls	
Standard Lighting	Standard Lighting Controls include:
Controls	 Occupancy-based controls (includes wall, ceiling, fixture-mounted,

² Ad-hoc approval by City Light staff for non-QPL products occurs under certain circumstances. Contact City Light for more details.

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Measure	Specifications
	etc.) Occupancy-based controls with daylighting Daylighting controls (multi-step, continuous dimming) Non-QPL listed networked lighting controls
	The incentive for eligible standard lighting controls savings is applied in addition to the luminaire energy savings performance incentive.
Networked Lighting Controls (NLC) including	Eligible systems must be listed on the <u>DLC's Networked Lighting</u> <u>Controls QPL</u> to receive the \$50/controlled fixture incentive (in addition to the luminaire energy savings performance incentive).
Luminaire Level Lighting Controls (LLLC)	 TLED products and HID LEDs are not eligible for the \$50/fixture incentive even if they are listed on the DLC's NLC QPL.
	 Each fixture controlled by QPL listed NLC systems must have a rated full-load input wattage of 20 watts or more to receive \$50/fixture (high-end trim/task tuning will not drop a fixture below the threshold).
	When applicable, projects must provide post-install documentation addressing building and space schedule and system set-up for high-end trim, vacancy sensors vs. occupancy sensors, and daylight zones—primary zone vs. secondary zone.
	 If high-end trim/task tuning is applied, use the new, high-end wattage as "full input wattage" in the Commercial Retrofit Workbook instead of rated fixture wattage.
Controls-Only Projects	 Proposed controls-only projects may be submitted via the Commercial Retrofit Workbook and receive the same energy savings incentive as standard lighting projects.
Other Lighting Speci	fications
HID Replacement LED Lamp Products	 HID replacement LED lamps include both E39 (mogul base) and standard Edison base sockets. Product Specification Sheets must verify the product is either: Type B: Internal Driver or Type C: External Driver.
	 HID replacement LED lamps are not considered retrofit kits regardless of bracket mounting or Type C configuration and are not eligible for the \$50/fixture incentive even if they are listed on the DLC's NLC QPL.
	 HID replacement LED lamps that operate off the existing HID ballast (Type A) are not eligible for program incentive.
Fixture Removal	 Incentives for fixture removal are only eligible within the context of a larger project (i.e., as part of a retrofit project being submitted to City Light) and qualify for the energy savings incentive. To receive funding for Fixture Removal, the fixture must be completely removed from the premises, and the electrical wiring to the fixture must be removed from the source junction box.
Small Business Bonus Incentive for Lighting	City Light customers with rate schedules beginning with "ESM" qualify for the small business bonus incentive.
J J	The small business bonus incentive applies a 20% incentive bonus to

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Measure	Specifications		
	new fixtures, retrofit kits, and s not apply to Networked Lightin lamp products (see incentive to	ng Controls, LLLC, or I	
	Projects which are eligible for the still subject to the incentive call of the project cost and to a mix.	p that limits the City L	ight rebate to 70%
	 For multifamily projects, eligible applications only. 	ility is limited to comr	mon-area
Indoor Horticulture	 Starting April 1, 2020, Seattle City Light requires all products and equipment submitted for indoor horticulture projects to be listed on DLC's <u>Indoor Horticulture Qualified Products List</u>. The following criteria, consistent with DLC's indoor horticulture product qualifications, applies to all horticulture projects submitted prior to April 1, 2020, effective the date of this document. 		
	Parameter/Attribute/Metric	Requirement	Method of Evaluation
	Photosynthetic Photon Efficacy (PPE)	≥2.1 µmol/J*	LM-79
	Photosynthetic Photon Flux Maintenance (PFMp) Q90	≥36,000 hours	LM-80
	Warranty	5 years	Specification sheet
	Power Factor	≥0.9	LM-79
	Total Harmonic Distortion	≤20%	LM-79
	Safety Certification	UL or ETL/Interek listed	Specification sheet
	 * Applies to fixtures used in vegetation and flowering stages. In addition to the required documentation for all standard lighting projects, indoor horticulture projects must also provide: Cannabis projects only: Washington State Liquor and Cannabis Board (WSLCB) license Seattle Marijuana Regulatory Business License Seattle Business License Tax Certificate Heating and cooling equipment description For change of use or new construction: a fixture spacing floor plan showing the layout and area of the lighting racks Tunable fixtures (any fixtures with variable wattage input) must use full input wattage to calculate incentive levels and energy savings in the Commercial Retrofit Workbook. City Light only provides funding for LED fixtures that meet DLC specifications. Other technologies including but not limited to TLEDs, screw-in lamps, HIDs CMH, and fixtures that are liquid- or air-cooled are not eligible. 		

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Retrofit HVAC

Measure	Specifications
All HVAC	 Backup equipment is not eligible for funding. Backup equipment is defined as equipment that is redundant to the primary equipment and rarely operates.
	 Equipment operating in a lead/lag configuration (alternating on/off sequence) is eligible for funding. Funding shall be based on the savings of the combined operating hours of each item.
	 Savings are calculated based on AHRI-rated equipment efficiencies at full load and part load conditions. Full load efficiencies cannot be substituted for weighted average or seasonal efficiencies. Integrated Part Load Value (IPLV) will be used for standard conditions and Non- Standard Part Load Values will be used for non-standard conditions, and the two will not be interchangeable.
	 Incentives are only available for savings above code for most like-for- like HVAC equipment replacements.
Water-Cooled Chillers	The as-built sequence of operation for the chiller and cooling tower must be submitted prior to payment and reflect the following:
	The condenser water temperature setpoint must automatically reset at part loads down to a minimum setpoint of no greater than 65°F condenser water returning from the cooling tower to the chiller. ³
	 If the chiller manufacturer indicates the proposed control would damage the chiller, notify City Light and set up a meeting to discuss. Do not institute any sequence that is not recommended by the chiller manufacturer.
	 During the on-site verification of installed equipment, the condenser water temperature setpoint must be consistent with the as-built sequence of operations.
Variable Speed Drives on Air Handling Units (AHUs)	 Existing constant volume AHU fan must serve variable air volume (VAV) systems.
	 The VSD shall have a screen or digital readout that indicates output frequency, current, voltage, power (kW), power factor and percent speed.
	If the VSD will be connected to the building's control system, the VSD must communicate kW and percent speed as trendable data points.
	Existing flow control devices (e.g., fan inlet vanes, inlet cones, or outlet dampers) being replaced by a VSD shall be fixed in the open position or

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³ This is consistent with the AHRI test standards for IPLV and NPLV ratings used as the basis for City Light energy conservation funding, which uses 65°F condenser water at all loads below 50% rated capacity (AHRI Standard 550-590).

Measure	Specifications
	completely removed.
	 VSD control status must be set to "auto".
	 Post-installation, customer must demonstrate that the fan speed varies based on zone conditions.
Air conditioners	Applies to air-cooled, through-the-wall, water-cooled, evaporatively cooled, and small duct high velocity equipment.
	Unitary or split system.
Packaged terminal air conditioners	Typically an air conditioner used in hotel rooms.
Air to air heat	Can replace electric resistance or existing heat pump.
pumps	Unitary or split systems.
Other heat pumps	Can replace electric resistance or existing heat pump.
	 Includes variable refrigerant flow projects (water, ground, or air source), hydronic heat pumps, or packaged terminal heat pumps. VRF projects with Dedicated Outdoor Air Systems will be treated as a complex project.
Computer Room Air Conditioners (CRACs)	Includes air-cooled, water-cooled, glycol-cooled, or fluid econo-cooled.
Multi-system, complex HVAC upgrades	Upgrades that involve several complex measures such as control projects, heat recovery, changing out large parts of a HVAC system, or whole building level changes may be eligible for custom incentives or pay-for performance programs that use a pre-post evaluation as a basis for savings. Please contact an Energy Advisor for more information.
Other measures	Variable speed drives installed in domestic water systems, chilled water
(City Light will provide customer with additional	pumps, condenser water pumps, cooling tower fans, and garage fans.
requirements if pursuing these measures)	 Data Center and IT efficiency measures including virtualization, air flow management, plug load reduction, and more efficient UPS batteries.
	Air and waterside economizers and heat recovery.
	Air compressor systems, including reducing leaks.
	Process loads (for industrial customers).
	 Cooling towers: fan, pump, and motor efficiency.
	HVAC controls (City Light will evaluate projects based on the incremental energy savings only, not the full cost of the project).
	Advanced Rooftop Controls for constant-volume unitary rooftop units.
	Connected Thermostats (web-based) replacing existing standard thermostats (one eligible per supply fan).

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